

Chapter 22

SBM Guide to the Literature as of June 1972

Rolf Hagedorn

Abstract A large number of research papers motivated Rolf Hagedorn to prepare a guide to the Statistical Bootstrap Model literature in mid-1972; he wanted to show the reader a) which publications best prepare the uninitiated, b) how different publications relate to each other, and c) he aimed to connect similar developments into groups. The two figures classify in this fashion the research works, providing in the rendition the relevant Refs. [[1]–[70]]. The editor updated all preprint citations for the 2015 printing.

This guide contains two figures and a list of references. It is neither complete nor unbiased.

Figure 22.1 gives the recommended reading sequence. After reading the introductory lectures (partly overlapping), the reader should be able to enter the lower boxes at any place, though it might be advantageous to follow the given sequence. The reader will notice overlaps and inconsistencies, because the reading sequence does not coincide with the historical development.

Figure 22.2 tries to picture the logical (and roughly the historical) connections. The isolated box with the name Koppe indicates that he was the first to contemplate statistical and thermodynamical interpretations of pion production. Unfortunately, his two papers came too early and went unnoticed. When two years later Fermi elaborated the same idea in great detail, he obviously had no knowledge of Koppe's work.

In both figures, the sequence goes along top to bottom lines of connection, unless indicated otherwise by an arrow.

Preprint CERN-TH 1535, dated 20 July 1972, see: <http://cds.cern.ch/record/961894?ln=en>
not intended as formal publication.

R. Hagedorn: (deceased) CERN-TH, 1211 Geneve 23, Switzerland

J. Rafelski (✉)

Department of Physics, The University of Arizona, Tucson, AZ 85721, USA

© The Author(s) 2016

J. Rafelski (ed.), *Melting Hadrons, Boiling Quarks – From Hagedorn Temperature to Ultra-Relativistic Heavy-Ion Collisions at CERN*,
DOI 10.1007/978-3-319-17545-4_22

235

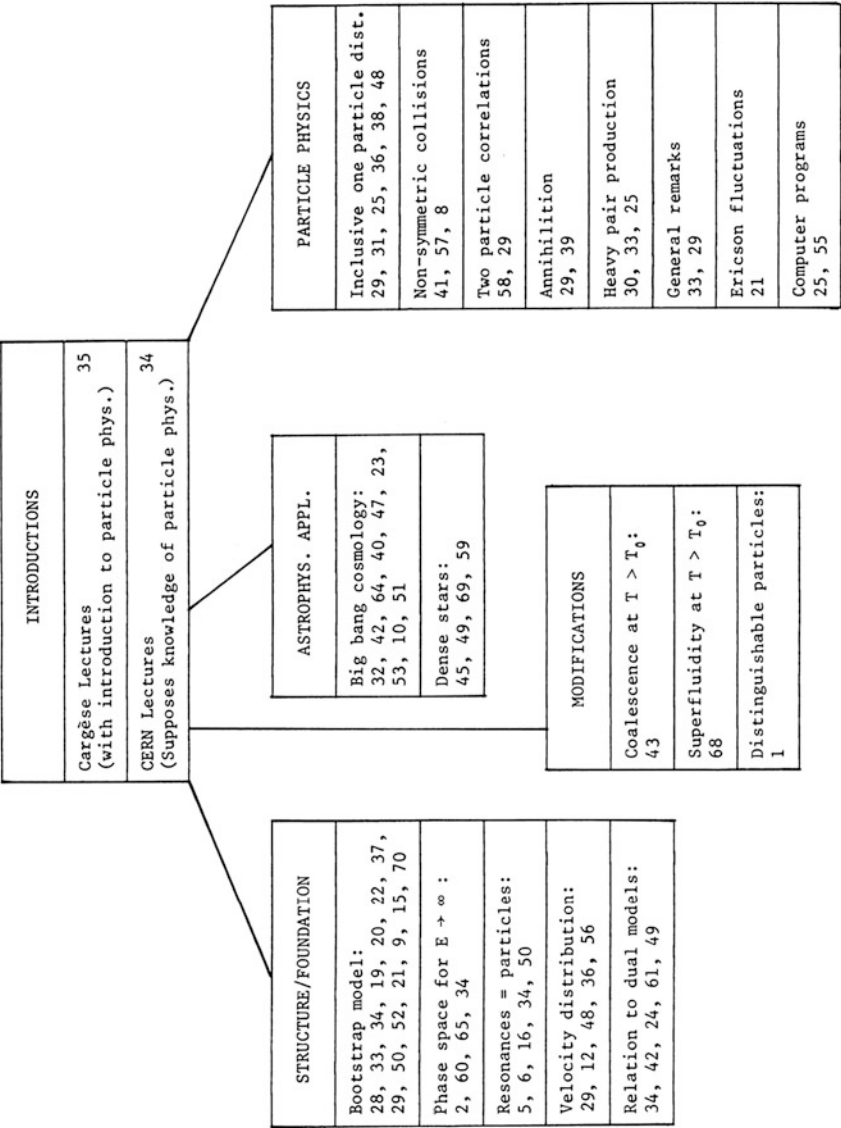


Fig. 22.1 Recommended reading sequence

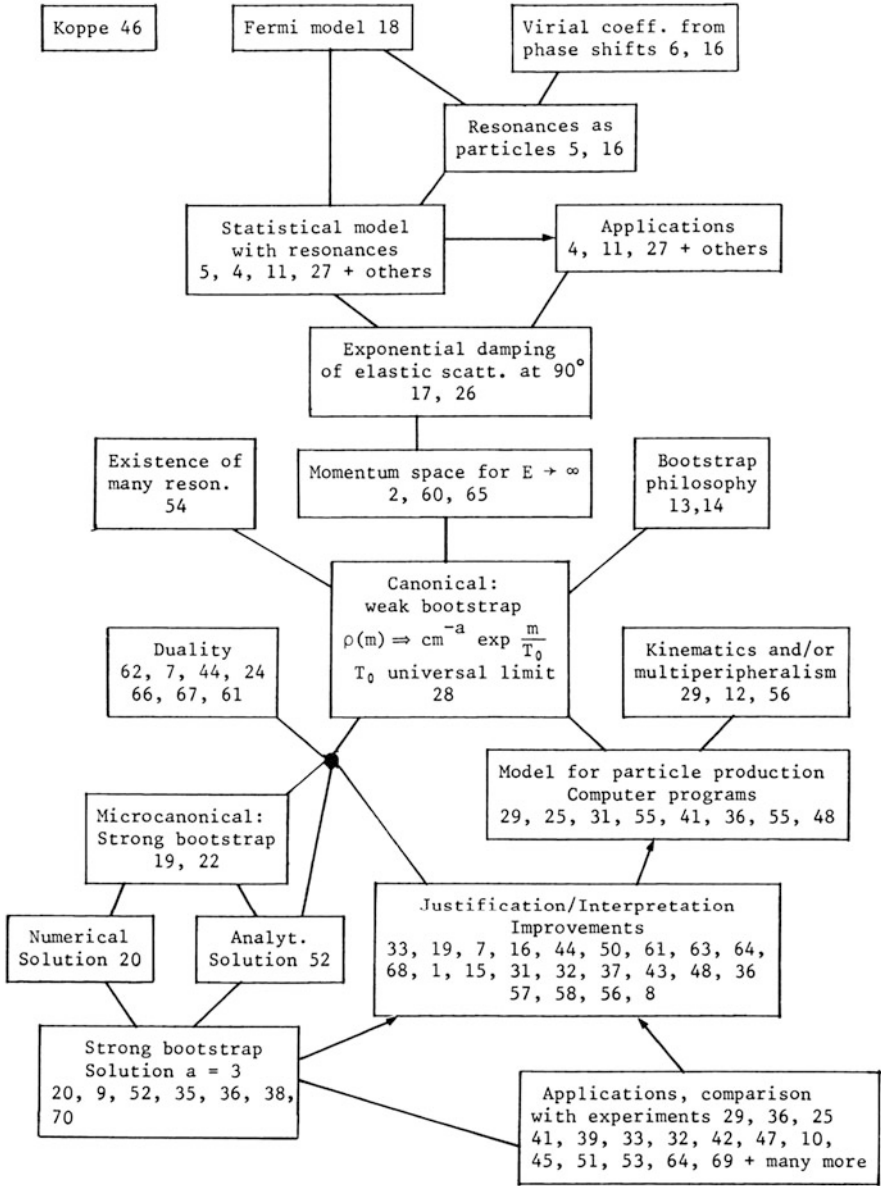


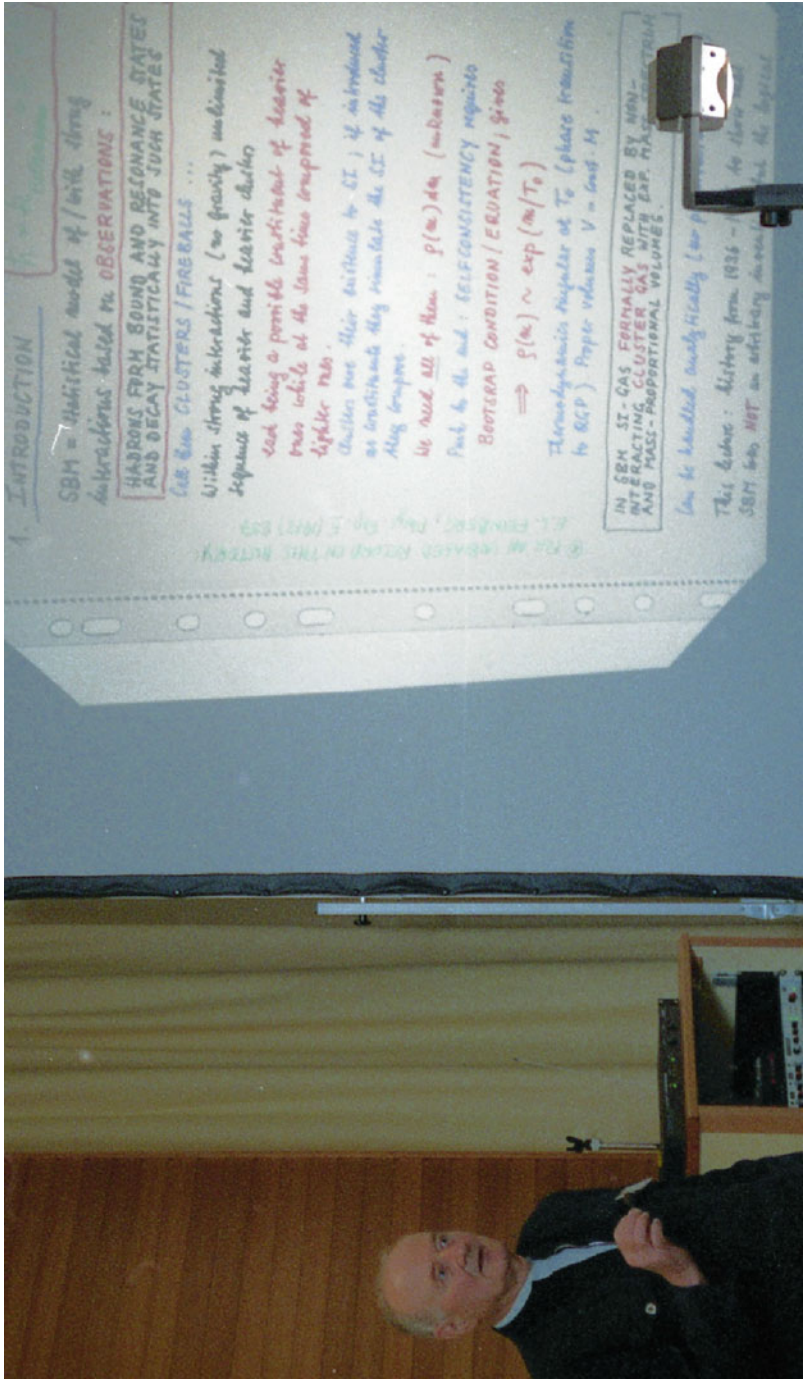
Fig. 22.2 Logical connections with reference numbers

Open Access This book is distributed under the terms of the Creative Commons Attribution Non-commercial License which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author(s) and sources are credited.

References

1. M. Alexanian, Phys. Rev. D **5**, 922 (1972)
2. G. Auberson, B. Escoubès, Nuovo Cimento **36**, 628 (1965)
3. J.N. Bahcall, S.C. Frautschi, Astrophys. J. **170**, L81 (1971)
4. V.S. Barashenkov, B.M. Barbashev, E.G. Bubelov, V.M. Maksimenko, Nucl. Phys. **5**, 17 (1958)
5. S.Z. Belenkij, Nucl. Phys. **2**, 259 (1956)
6. E. Beth, G.E. Uhlenbeck, Physica **4**, 915 (1937)
7. R. Brout, Letter to R. Hagedorn, March 1969 (unpublished)
8. B. Buschbeck, J. Hödl, Nucl. Phys. B **48**, 288 (1972)
9. R.D. Carlitz, Phys. Rev. D **5**, 3231 (1972)
10. R.D. Carlitz, C.S. Frautschi, W. Nahm, Astron. Astrophys. **26**, 171 (1973)
11. F. Cerulus, Nuovo Cimento **14**, 827 (1959)
12. F. Cerulus, *Proceedings of the Colloquium on High Multiplicity Hadron Interactions*, Ecole Polytechnique, Paris, 1970
13. G.F. Chew, S. Mandelstam, Nuovo Cimento **19**, 752 (1961)
14. G.F. Chew, Phys. Today **23**, 23 (1970)
15. C.B. Chiu, R.L. Heimann, Phys. Rev. D **4**, 3184 (1971)
16. R. Dashen, S. Ma, H.J. Bernstein, Phys. Rev. **187**, 349 (1959)
17. G. Fast, R. Hagedorn, Nuovo Cimento **27**, 208 (1963); G. Fast, R. Hagedorn, L.W. Jones, Nuovo Cimento **27**, 856 (1963)
18. E. Fermi, Prog. Theor. Phys. **5**, 570 (1950)
19. S.C. Frautschi, Phys. Rev. D **3**, 2821 (1971)
20. S.C. Frautschi, C.J. Hamer, Phys. Rev. D **4**, 2125 (1971)
21. S.C. Frautschi, Nuovo Cimento A **12**, 133 (1972)
22. S.C. Frautschi, *Lectures Given at the Torin Colloquium on Thermodynamics of Strong Interactions*; forthcoming report of the Institute of Theoretical Physics, University of Torino (1972)
23. S.C. Frautschi, G. Steigmann, J. Bahcall, Astrophys. J. **175**, 307 (1972)
24. S. Fubini, D. Gordon, G. Veneziano, Phys. Lett. B **29**, 679 (1969); S. Fubini, G. Veneziano, Nuovo Cimento A **64**, 811 (1969)
25. H. Grote, R. Hagedorn, J. Ranft, *Atlas of Particle Spectra* (CERN, 1970)
26. R. Hagedorn, Nuovo Cimento **35**, 216 (1965)
27. R. Hagedorn, Nuovo Cimento **15**, 434 (1960)
28. R. Hagedorn, Suppl. Nuovo Cimento **3**, 147 (1965)
29. R. Hagedorn, J. Ranft, Suppl. Nuovo Cimento **6**, 169 (1968)
30. R. Hagedorn, Suppl. Nuovo Cimento **6**, 311 (1968)
31. R. Hagedorn, Nuovo Cimento A **56**, 1027 (1968)
32. R. Hagedorn, Astron. Astrophys. **5**, 184 (1970)
33. R. Hagedorn, Nucl. Phys. B **24**, 93 (1970)
34. R. Hagedorn, *Thermodynamics of Strong Interactions*. Yellow Report CERN-71-12 (1971)
35. R. Hagedorn, Lectures to be Published in the *Proceedings of the Cargèse Summer School on Physics of the Early Universe and Cosmology*, Cargèse, 1971
36. R. Hagedorn, J. Ranft, Nucl. Phys. B **48**, 157 (1972)
37. R. Hagedorn, *Lectures given at the Torino Colloquium on Thermodynamics of Strong Interactions*; forthcoming report of the Institute of Theoretical Physics, University of Torino (1972)

38. R. Hagedorn, Lecture to be published in *The Proceedings of the Third International Colloquium on Many-Body Reactions*, Zakopane, 1972
39. C.J. Hamer, *Nuovo Cimento A* **12**, 162 (1972)
40. E.R. Harrison, *Phys. Rev. D* **1**, 2726 (1970)
41. H. Than, J. Ranft, *Lett. Nuovo Cimento* **5**, 655 (1972)
42. K. Huang, S. Weinberg, *Phys. Rev. Lett.* **25**, 895 (1970)
43. K. Imaeda, *Nuovo Cimento Lett.* **1**, 290 (1971)
44. A. Krzywicki, *Phys. Rev.* **187**, 1964 (1969)
45. K. Koebke, E. Hilf, R. Ebert, *Nature* **226**, 625 (1970)
46. H. Koppe, *Z. Naturforsch. A* **3**, 251 (1968); H. Koppe, *Phys. Rev.* **76**, 688 (1949)
47. W. Kundt, *Springer Tracts Mod. Phys.* **58**, 1 (1971)
48. J. Letessier, A. Tounsi, *Nuovo Cimento A* **11**, 353 (1972)
49. Y.C. Leung, G.G. Wang, *Astrophys.* **170**, 499 (1971); H. Lee, Y.C. Leung, C.G. Wang, *Astrophys. J.* **166**, 387 (1971)
50. G. Matthiae, *Nucl. Phys. B* **7**, 142 (1948)
51. C. Mollenhoff, *Astron. Astrophys.* **7**, 488 (1970)
52. W. Nahm, *Nucl. Phys. B* **45**, 525 (1972)
53. R. Omnès, *Phys. Rep. C* **3**, 1 (1972)
54. Particle Data Group, *Phys. Lett. B* **33**, 1 (1970)
55. J. Ranft, Leipzig University Report TUL 37 (1970), reprinted as 'Reprint 5' in [25]
56. G. Ranft, J. Ranft, *Phys. Lett. B* **32**, 207 (1970)
57. J. Ranft, E. Matthäus, *Phys. Lett. B* **40** 230 (1972)
58. G. Ranft, J. Ranft, *Phys. Lett. B* **40**, 131 (1972); G. Ranft, J. Ranft, Inclusive two-particle correlations from the thermodynamic model. Preprint CERN-TH-1532
59. C.E. Rhoades, R. Ruffini, *Astrophys. Lett.* **163**, L83 (1971)
60. H. Satz, *Nuovo Cimento* **37**, 1407 (1965)
61. H. Satz, Lecture to be Published in *Proceedings of the Colloquium on High Multiplicity Hadron Interactions*, Zakopane, 1972
62. C. Schmid, *Phys. Rev. Lett.* **20**, 628 (1968)
63. L. Sertorio, M. Toller, *Nuovo Cimento A* **14**, 21 (1973)
64. D. Stauffer, *Phys. Rev. D* **6**, 1797 (1972)
65. J. Vandermeulen, *Bull. Soc. R. Sci. Liège (Belgium)* **34**^e(1/2), 34 (1965)
66. G. Veneziano, *Nuovo Cimento A* **57**, 190 (1968)
67. G. Veneziano, *Phys. Today* **22**, 31 (1969)
68. A. Mann, R. Weiner, *Nuovo Cimento Lett.* **2**, 248 (1971); A. Mann, R. Weiner, *Phys. Lett. B* **40**, 383 (1972)
69. J.C. Wheeler, *Astrophys. J.* **169**, 105 (1971)
70. J. Yellin, *Nucl. Phys. B* **52**, 583 (1973)



Rolf Hagedorn presents a SBM retrospective, June 1994, 22 years after this SBM guide is issued. Image credit: CERN Image 1994-06-63-022